

REMARKS

Favorable reconsideration and allowance of the claims presented herein are respectfully requested.

Claims 1-29 are pending in this application. By this Amendment, new Claim 30 has been added to exemplify another embodiment of the present application. No new matter has been added to subject application nor have any new issues been raised. Moreover, it is believed that all of the claims presented herein are in condition for immediate allowance and such is respectfully requested.

The Examiner has rejected Claims 1-29 under the second paragraph of 35 U.S.C. §112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner alleges that (1) the recitation “air bubble shaped” in Claims 1-5, 13, 23-25 and 27-29 and (2) the recitation “a bubble side” in Claims 3, 4, 13 and 14 is vague and indefinite and that clarification is requested.

It is a well established rule that “whether a claim is invalid for indefiniteness requires a determination whether those skilled in the art would understand what is claimed when the claim is read in light of the specification.” *Morton International Inc. v. Cardinal Chemical Co.*, 28 USPQ2d 1190, 1194-95 (CAFC 1993). Applicant submits that the recitations “air bubble shaped” as used in the claimed expression “layers of an air bubble shaped closed cellular material” as presently recited in Claims 1-5, 13, 23-25 and 27-29 and “a bubble side” as used in the claimed expression “wherein said bubble layers has a flat side and a bubble side” as presently recited in Claims 3, 4, 13 and 14 are fully definite as to allow one skilled in the art to understand what is claimed when read in light of the specification.

Firstly, the layers of an air bubble shaped closed cellular material and wherein the bubble layers have a flat side and a bubble side are known materials as to allow one skilled in the art to understand what is being claimed. For example, the specification at page 14, lines 9-15 states that commercially available air "bubble" shaped cellular materials are offered by Sealed Air Corp. under the trademarks, Bubble Wrap, Air Cap, Poly Cap, Poly Cap Lite and Bubble Mask, those offered by Pactiv under the trademarks, Astro-Supra Bubble, Astro-Cell and Astro-Cell Plus; and those offered by Poly Air under the trademark Dura Bubble. Secondly, the specification further sets forth in paragraph 34 of pages 13 and 14 and in Figure 3 a disclosure of a mat having layers of an air bubble shaped closed cellular material and wherein the bubble layers have a flat side 36 and a bubble side 38. Finally, the term bubble is well recognized and should be interpreted as having its ordinary dictionary meaning: spherical or hemispherical film ... filled with air or gas. Such being the case, one skilled in the art would readily understand the recitations "air bubble shaped" as used in the expression "layers of an air bubble shaped closed cellular material" as presently recited in Claims 1-5, 13, 23-25 and 27-29 and "a bubble side" as used in the expression "wherein said bubble layers has a flat side and a bubble side" as presently recited in Claims 3, 4, 13 and 14 when analyzing the contents of the specification. Accordingly, the recitations "air bubble shaped" as presently recited in Claims 1-5, 13, 23-25 and 27-29 and "a bubble side" as presently recited in Claims 3, 4, 13 and 14, when read in light of the specification, are believed to be sufficiently clear and definite as to comply with the requirements for definiteness under the second paragraph of 35 U.S.C. §112.

The Examiner has rejected Claims 1-5 under 35 U.S.C. § 102(b) as being anticipated by Tricca et al. U.S. Patent No. 4,574,101 ("Tricca"). It is respectfully submitted that the claims, as pending, are patentably distinct from Tricca.

Tricca discloses an exercise mat which includes, among others, a core layer 14 having a plurality of holes 18 formed vertically or horizontally through the core layer 14 in a symmetrical pattern. The top and bottom surface of the core layer have an outer layer (12 and 16) laminated thereto to trap air in the holes to form air cylinders which are distributed symmetrically throughout the core layer 14 of the mat. In other words, the exercise mat of Tricca is composed of a core layer having a plurality of holes formed therethrough and an outer layer laminated to the top surface of the core layer and another outer layer laminated to the underside of the core layer. See Tricca, Figures 1 and 2. In this manner, the exercise mat of Tricca will possess shock absorbing qualities such that upon use, e.g., running in place or jumping rope, the mat can cushion 70% of the body shock.

In contrast thereto, independent Claim 1 of the invention is particularly directed to a mat for decreasing musculoskeletal fatigue in humans during prolonged static postural stress comprising, *inter alia*, "one or more layers of an air bubble shaped closed cellular material."

For a reference to anticipate a claim under 35 U.S.C. §102, it is required that all of the elements and limitations of the claim be found within a single prior art reference. There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the art. *See Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F. 2d 1565 (Fed. Cir. 1991) and cases cited therein. In short, the mat of Claim 1 includes one or more layers having air shaped bubble closed cellular material (see figure 3) and a second layer selected from the group of materials consisting of closed cellular polyethylene foam and closed cellular polypropylene foam materials. The layers having air shaped bubble closed cellular material do not possess holes punched through the layer and a layer on the top and bottom surface to close the holes. In other words, contrary to Claim 1 of the invention, the Tricca mat

requires holes formed through the layer and then closed off with a polyethylene material to provide the required shock absorbing qualities. Thus, the exercise mat of Tricca is completely different than the presently claimed mat. Accordingly, in lacking any disclosure or suggestion of a mat comprising, *inter alia*, one or more layers having air shaped bubble closed cellular bubble material, Claim 1 is patentably distinct from Tricca under 35 U.S.C. 102(b). For the foregoing reasons, reconsideration and withdrawal of the rejection is respectfully requested.

Claims 2-5 depend from Claim 1, and are patentable for at least the reasons Claim 1 is patentable as discussed above.

The Examiner has rejected Claim 29 under 35 U.S.C. § 102(b) as being anticipated by Kolsky U.S. Patent No. 5,274,846 ("Kolsky"). It is respectfully submitted that the claims, as pending, are patentably distinct from Tricca.

Nowhere does Kolsky disclose or suggest a method for decreasing musculoskeletal fatigue in humans resulting from static postural stress in a surgical theatre during open operative procedures which method also facilitates maintaining the surgical theatre in a surgically safe environment comprising the steps of (a) positioning a completely disposable mat on the floor of the surgical theatre prior to or during an operative procedure; said mat comprising a layer of closed cellular polypropylene foam material and one or more layers selected from the group of materials consisting of closed cellular polyethylene foam and air bubble shaped closed cellular materials; (b) supporting a human on said mat during a period of static postural positioning; and (c) disposing of said mat after the conclusion of the operative procedure.

Rather, Kolsky discloses a cushion, pad or mat for use as knee pads and shin guards, exercise mats, beach pads, stadium seat cushions, wheelchair cushions, bathtub liners, or in luggage handles and pads for shoulder straps. Also, the multilayer cushion material may be used

as a liner material for gloves, for example, as padding in a baseball glove or along the fingers of a glove. At no point is there any disclosure or suggestion in Kolsky of the specifically recited steps in the claimed method for decreasing musculoskeletal fatigue in humans resulting from static postural stress in a surgical theatre during open operative procedures. Unquestionably, then, the presently claimed method recites patentable subject matter relative to Kolsky.

If it is the Examiner's position that Kolsky teaches each of the specifically recited steps in the claimed method, the Examiner is respectfully requested to identify with particularity (by column and line number) where *in* Kolsky such teaching can be found. As all of the elements and limitations of Claim 29 are *not* found within Kolsky, the rejection of Claim 29 under 35 U.S.C. §102(b) is in error. Accordingly, withdrawal of the rejection of Claim 29 under 35 U.S.C. 102(b) is therefore respectfully requested.

The Examiner has rejected Claims 6-12 under 35 U.S.C. § 103(a) as being obvious over Tricca in view of Small U.S. Patent No. 4,644,592 ("Small").

The deficiencies of Tricca discussed above with respect to the rejection of Claim 1 applies with equal force to this rejection. Small does not cure and is not cited as curing the above-noted deficiencies of Tricca. Rather, Small is merely cited for its disclosure of a base layer including a low tack adhesive bottom surface and a removable liner releasably attached to the lower surface of the low-tack adhesive.

However, this rejection is traversed for at least the following reasons. The Examiner's statement in the Office Action that "it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided that mat in Trica with a base layer including a low-tack adhesive bottom surface and a removable liner releasably attached to the lower surface of the low-tack adhesive as suggested by Small in order to produce a floor mat

with an upper surface adapted for frictional contact with human body parts is wholly unsupported and cannot possibly serve as a basis for this rejection. Small discloses disposable floor mats for use in areas such as, for example, bathtubs or shower stalls. Small further discloses that the disposable floor mats contain a removable liner releasably attached to the lower surface of the low-tack adhesive so that upon removal of the liner of the floor mat can be secured to a surface during extended exposure to a water-filled environment. Tricca discloses that the exercise mat is preferably formed with a hinge to allow for the mat to be easily transported from one place to another, i.e., non-disposable mats. As such, one skilled in the art would not look to the disposable floor mats disclosed in Small to modify the exercise mats of Tricca as it would be counter-intuitive to include a base layer including a low-tack adhesive bottom surface and a removable liner releasably attached to the lower surface of the low-tack adhesive to the non-disposable exercise mat of Tricca.

With respect to Claim 9, the Examiner maintains Tricca fails to teach anti-static closed cellular polypropylene foam material for the cover layer. Accordingly, “[I]t is of the Examiner’s belief that it would have been obvious to one of ordinary skill in the art at the time the applicant’s invention was made to have modified the cover layer of in Tricca et al. (Fig. 1, #12; also see col. 2, lines 20-21) to consist of an anti-static closed cellular polypropylene foam material, since it has been held to be within the general skill of one of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.” citing *In re Leshin*, 125 USPQ 416 (CCPA 1960). The issue in *In re Leshin* was whether the selection of known plastics to make a container-dispenser of type made of plastics prior to the invention would be obvious. However, unlike the container-dispenser of *In re*

Leschin, applicants are claiming a mat made of layers of different materials each having different properties that, when combined, provide a mat having improved ergonomic properties in surgery.

There is no teaching, suggestion or motivation in Tricca to provide a third layer of an anti-static closed cellular polypropylene foam material to the exercise mat disclosed therein. Despite the fact that the exercise mat of Tricca is completely different than the presently claimed mat as discussed above, Tricca merely discloses a core layer having an outer layer on both sides of the core layer to close off the holes punched therethrough. In fact, the mat of Tricca contains the core layer to provide the cushion of the body shock and provides the outer layer as a way to seal off the holes and form the air cylinders. In this manner, Tricca discloses the use of low cost polyethylene material as the outer layer. At no point in Tricca is there any suggestion, motivation or even a hint to modify the mat therein by adding a third layer to the mat which is anti-static closed cellular polypropylene foam material. Accordingly, if it the Examiner's position that Tricca teaches adding a cover layer of anti-static closed cellular polypropylene foam material to the mat disclosed therein, the Examiner is respectfully requested to identify with particularity (by column and line number) where *in Tricca* such teaching can be found.

Since Tricca with Small do not teach or suggest a mat for decreasing musculoskeletal fatigue in humans during prolonged static postural stress comprising, *inter alia*, "one or more layers of an air bubble shaped closed cellular material" as presently recited in Claim 1 from which Claims 6-12 ultimately depend, Claims 6-12 are believed to be nonobvious, and therefore patentable, over Tricca and Small. Accordingly, withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

The Examiner has rejected Claims 13-16 under 35 U.S.C. § 103(a) as being obvious over Tricca in view of Kolsky.

Nowhere does Tricca disclose or suggest a disposable surgical mat comprising, *inter alia*, a first layer and a third layer each composed of an anti-static air bubble shaped closed cellular material having a flat side and a bubble side, a second layer composed of an anti-static closed cellular polyethylene foam material between the first and third layers, and a fourth layer composed of an anti-static polypropylene closed cellular foam material over the third layer as generally recited in Claim 13.

Rather, Tricca discloses an exercise mat which includes, among others, a core layer 14 having a plurality of holes 18 formed vertically or horizontally through the core layer 14 in a symmetrical pattern. The top and bottom surface of the core layer have an outer layer (12 and 16) laminated thereto to trap air in the holes to form air cylinders which are distributed symmetrically throughout the core layer 14 of the mat. In other words, the exercise mat of Tricca is composed of a core layer having a plurality of holes formed therethrough and an outer layer laminated to the top surface of the core layer and another outer layer laminated to the underside of the core layer. (See Tricca, Figures 1 and 2). As discussed above, the mat of Tricca is completely different than the presently claimed mat, i.e., the layers having air shaped bubble closed cellular material do not possess holes punched through the layer and a layer on the top and bottom surface to close the holes. As such, nothing in Tricca would lead one skilled in the art to modify the mat of Tricca to arrive at the presently claimed mat as the mat of Tricca is completely different than the claimed mat.

Kolsky does not cure and is not cited as curing the deficiencies of Tricca. Rather, Kolsky is merely cited for its disclosure of adding a third and fourth layer to the mat of Tricca. Thus, even if the third and fourth layers of Kolsky were added to the layers of Tricca, one would not arrive at the presently claimed mat.

Since Tricca and Kolsky do not teach or suggest a disposable surgical mat comprising, *inter alia*, a first layer and a third layer each composed of an anti-static air bubble shaped closed cellular material having a flat side and a bubble side, a second layer composed of an anti-static closed cellular polyethylene foam material between the first and third layers, and a fourth layer composed of an anti-static polypropylene closed cellular foam material over the third layer as generally recited in Claim 13, Claims 13-16 are believed to be nonobvious, and therefore patentable, over Tricca and Kolsky. Accordingly, withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

The Examiner has rejected Claims 17-21 under 35 U.S.C. § 103(a) as being obvious over Tricca in view of Kolsky and further in view of Small.

The deficiencies of Tricca and Kolsky discussed above with respect to the rejection of Claim 13 applies with equal force to this rejection. Small does not cure and is not cited as curing the above-noted deficiencies of Tricca. Rather, Small is merely cited for its disclosure of a base layer including a low tack adhesive bottom surface and a removable liner releasably attached to the lower surface of the low-tack adhesive and not at all to the presently claimed disposable surgical mat comprising, *inter alia*, a first layer and a third layer each composed of an anti-static air bubble shaped closed cellular material having a flat side and a bubble side, a second layer composed of an anti-static closed cellular polyethylene foam material between the first and third layers, and a fourth layer composed of an anti-static polypropylene closed cellular foam material over the third layer.

Since Tricca, Kolsky and Small, alone or in combination, do not teach or suggest a disposable surgical mat comprising, *inter alia*, a first layer and a third layer each composed of an anti-static air bubble shaped closed cellular material having a flat side and a bubble side, a

second layer composed of an anti-static closed cellular polyethylene foam material between the first and third layers, and a fourth layer composed of an anti-static polypropylene closed cellular foam material over the third layer as generally recited in Claim 13 from which Claims 17-21 ultimately depend, the rejection under 35 U.S.C. §103(a) is believed to be unwarranted and withdrawal of this rejection is respectfully requested.

The Examiner has rejected Claims 22-28 under 35 U.S.C. § 103(a) as being obvious over Kolsky in view of Small.

Nowhere does Kolsky disclose or suggest a disposable surgical mat comprising a first layer including an anti-static closed cellular polypropylene foam material, a second layer under said first layer including an anti-static closed cellular polyethylene foam material, and a third layer under said second layer including a low tack adhesive material as generally recited in Claim 22.

Rather, Kolsky merely discloses that a cushion or pad can be formed from a first layer 10 of a polymeric foam material of either open cell or closed cell construction that is bonded via a layer 12 of adhesive, heat welds or ultrasonic welds to a second layer 14 of a polymeric foam material of either open cell or closed cell construction wherein the adhesive layer and second layer may have the same molecular structure, e.g., polyethylene or polyvinyl chloride or polypropylene. Kolsky further discloses that it is advantageous in some applications to have one layer 12 or 14 of open cell construction and the other layer 14 or 12 of closed cell construction.

(At no point is there any disclosure or suggestion in Kolsky of a first layer including an anti-static closed cellular polypropylene foam material, a second layer under said first layer including an anti-static closed cellular polyethylene foam material and a third layer under said second layer including a low tack adhesive material to form a disposable surgical mat. Instead, Kolsky

discloses a cushion, pad or mat for use as knee pads and shin guards, exercise mats, beach pads, stadium seat cushions, wheelchair cushions, bathtub liners, or in luggage handles and pads for shoulder straps. Also, the multilayer cushion material may be used as a liner material for gloves, for example, as padding in a baseball glove or along the fingers of a glove. Accordingly, nothing in Kolsky would lead one skilled in the art to modify the cushions or pads disclosed therein to add a low tack adhesive layer to the cushion or pad of Kolsky and arrive at the presently claimed disposable surgical mat.

Small does not cure and is not cited as curing the deficiencies of Kolsky. Rather, Small is merely cited for its discloses of a removable liner releasably attached to the lower surface of the low-tack adhesive so that upon removal of the liner of the floor mat can be secured to a surface during extended exposure to a water-filled environment.

Since Kolsky and Small do not disclose or suggest a disposable surgical mat comprising a first layer including an anti-static closed cellular polypropylene foam material, a second layer under said first layer including an anti-static closed cellular polyethylene foam material, and a third layer under said second layer including a low tack adhesive material as generally recited in Claim 22, Claims 22-28 are believed to be nonobvious, and therefore patentable, over Kolsky and Small. Accordingly, withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

For the foregoing reasons, Claims 1-29 as presented herein are believed to be in condition for immediate allowance. Such early and favorable action is earnestly solicited.

Respectfully submitted,



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